Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A superconducting device comprising:

an oxide superconducting wire comprising an oxide superconductor having a sheath portion covering said oxide superconductor and the sheath portion comprising one of silver or a silver alloy;

wherein said oxide superconductor comprises a material that includes a Bi-Pb-Sr-Ca-Cu-O-based oxide superconductor containing bismuth, lead, strontium, calcium and copper and including ~~a~~ Bi2223 phase crystals having atomic ratios of (bismuth and lead):strontium:calcium:copper expressed as 2:2:2:3 in approximation;

the oxide superconductor wire has a thickness that has been reduced by heat treatment performed under a pressurized atmosphere having the pressure of at least 1 MPa and less than 50 MPa; and

the oxide superconductor exhibits a sintering density of at least 93% by the Bi2223 phase crystals exhibiting a reduced number of gaps between the Bi2223 phase crystals due to plastic flow of the Bi2223 phase crystals.

2. (Previously Presented) The superconducting device according to claim 1, having said oxide superconducting wire with said oxide superconductor exhibiting said sintering density of at least 95 %.

3. (Previously Presented) The superconducting device according to claim 2, having said oxide superconducting wire with said oxide superconductor exhibiting said sintering density of at least 99 %.

4. (Currently Amended) A superconducting cable comprising:

an oxide superconducting wire comprising an oxide superconductor having a sheath portion covering said oxide superconductor during a heat treatment, the oxide superconductor wire has a thickness that has been reduced by heat treatment performed under a pressurized atmosphere having the pressure of at least 1 MPa and less than 50 MPa and the sheath portion comprising one of silver and silver alloy;

wherein said oxide superconductor comprises a material that includes a Bi-Pb-Sr-Ca-Cu-O-based oxide superconductor containing bismuth, lead, strontium, calcium and copper and including ~~a~~ Bi2223 phase crystals having atomic ratios of (bismuth and lead): strontium:calcium:copper expressed as 2:2:2:3 in approximation;
and

the oxide superconductor exhibiting sintering density of at least 93 % by the Bi2223 phase crystals exhibiting a reduced number of gaps between the Bi2223 crystals due to plastic flow of the Bi2223 phase crystals.

5. (Previously Presented) The superconducting cable according to claim 4, having said oxide superconducting wire with said oxide superconductor exhibiting said sintering density of at least 95 %.

6. (Previously Presented) The superconducting cable according to claim 5, having said oxide superconducting wire with said oxide superconductor exhibiting said sintering density of at least 99 %.

7. (Previously Presented) The superconducting cable of claim 1, wherein the oxide superconductor wire has the sheath covering during a heat treatment.

8. (Previously Presented) The superconducting cable of claim 1, wherein the oxide superconductor wire and the sheath are sintered.

9. (Previously Presented) The superconducting cable of claim 4, wherein the oxide superconductor wire has the sheath covering during a heat treatment.

10. (Previously Presented) The superconducting cable of claim 4, wherein the oxide superconductor wire and the sheath are sintered.

11. (Currently Amended) A method for creating a superconducting cable comprising:

providing an oxide superconducting wire comprising an oxide superconductor having a sheath portion covering said oxide superconductor; during a heat treating the oxide superconducting wire under a pressurized atmosphere having the pressure of at least 1 MPa and less than 50 MPa to reduce the thickness of the oxide superconducting wire, and the sheath portion comprising silver or a silver alloy;

wherein said oxide superconductor is a Bi-Pb-Sr-Ca-Cu-O-based oxide superconductor containing bismuth, lead, strontium, calcium and copper and including ~~a~~ and Bi2223 phase crystals having atomic ratios of (bismuth and lead):strontium:calcium:copper expressed as 2:2:2:3 in approximation; and

wherein the heat treatment provides the oxide superconductor with a sintering density of at least 93% and reduces a number of gaps between the Bi2223 phase crystals due to plastic flow to the Bi2223 phase crystals, the reduced number of gaps are less than a number of gaps between the Bi2223 phase crystals prior to heat treatment.

12. (Previously Presented) The method of creating a superconducting cable according to claim 11, further comprising providing the superconducting wire with said oxide superconductor exhibiting said sintering density of at least 95 %.

13. (Previously Presented) The method of creating a superconducting cable according to claim 11, further comprising providing the superconducting wire with said oxide superconductor exhibiting said sintering density of at least 99 %.

14. (Previously Presented) The superconducting device according to claim 1, wherein the oxide superconductor wire thickness has been reduced by heat treatment from about 0.006 mm to about 0.01 mm.

15. (Currently Amended) The superconducting device according to claim 1, wherein the pressure of the pressurized atmosphere during heat treatment is at least ~~10~~ 30 MPa ~~further comprising reduced number of gaps between oxide superconducting crystals relative to the oxide superconducting crystals without the reduction of the thickness~~.

16. (Previously Presented) The superconducting device according to claim 1, further comprising an increased sintering density relative to the sintering density prior to the heat treatment.

17. (Previously Presented) The superconducting device according to claim 4, wherein the oxide superconductor wire thickness has been reduced by heat treatment from about 0.006 mm to about 0.01 mm.

18. (Currently Amended) The superconducting device according to claim 4, wherein the pressure of the pressurized atmosphere during heat treatment is at least 30 MPa ~~further~~

~~comprising reduced number of gaps between oxide superconducting crystals relative to the number of gaps between oxide superconducting crystals without the reduction of the thickness~~.

19. (Currently Amended) The method of creating a superconducting cable according to claim 11, wherein a heat treating is performed under a pressurized atmosphere having the pressure of at least ~~10~~ 30 MPa the heat treating reduces the thickness of the oxide superconducting wire from about 0.006 mm to about 0.01 mm.

20. (Previously Presented) The method of creating a superconducting cable according to claim 11, further comprising reducing the number of gaps between oxide superconducting crystals relative to the number of gaps between oxide superconducting crystals without the reduction of the thickness.

21. (Previously Presented) The superconducting device according to claim 1, wherein the sintering density of at least 93% is greater than the density of the oxide superconductor wire prior to performing heat treatment under the pressurized atmosphere.

22. (Previously Presented) The superconducting device according to claim 4, wherein the oxide superconductor wire is composed of a material that has a first density prior to the heat treatment and wherein the first density is less than the sintering density after the heat treatment.

23. (New) The superconducting device according to claim 1, wherein the reduced number of gaps between the Bi2223 phase crystals are less than a number of gaps between the Bi2223 phase crystals prior to the heat treatment.

24. (New) The superconducting device according to claim 4, wherein the reduced number of gaps between the Bi2223 phase crystals are less than a number of gaps between the Bi2223 phase crystals prior to the heat treatment.